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ABSTRACT

The bibliography contains abstracts of 31 journal articles, documents, and books, concerning the attrition of educational personnel, especially special education personnel. Citations are dated from 1980 through 1988 and are listed alphabetically by author. In addition to bibliographic data, citations contain descriptive abstracts of up to 300 words and sources, such as the Educational Resources Information Center. (DB)

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An Annotated Bibliography on Attrition

This bibliography covers selected literature whose emphasis is primarily on attrition of educational personnel. Although some entries speak to both attrition and retention, publications that deal exclusively with retention are not included here but will be the subject of other information to be disseminated by the Clearinghouse.

Most of the literature cited in this bibliography deals with attrition among special education personnel. Some entries, however, concern attrition in general education, or across education. This information is thought to be valuable and generalizable to problems of attrition in special education and related services.

Additional literature searches in the future will lead to expansions and updated editions of this bibliography. Information for inclusion in future bibliographies is welcomed.

February 1989

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Baker, A. M., & Eisenbach, J. (1980). Employment and attrition of special education students receiving graduate traineeships. Exceptional Children, 47 (3), 226-227. EJ 236769 (available UMI)

A pilot study was undertaken at Western Michigan University to determine attrition and employment of personnel trained to serve students with handicaps, with focus primarily on those who had received graduate traineeships. Results showed that only a small percentage (3.2%) of persons who received graduate traineeships did not find employment "in settings serving the handicapped" following graduation. Further, 74.7% of students who received traineeships found employment that was directly related to teaching students with handicaps. These findings support the utility of federal funds in supporting traineeships, and also indicate that most graduates find employment in areas related to services for the handicapped, although they may change positions within the field.

Bensky, J. M., Shaw, S. F., Gouse, A. S., Bates, H., Dixon, B., & Beane, W. E. (1980). Public Law 94-142 and stress: A problem for educators. Exceptional Children, 47(1), 24-29. EJ 234361 (available UMI)

This article reports on a study of 114 full-time educators who were attending summer classes at three colleges in different regions of Connecticut. The sample consisted of 33.9% special education teachers, 24.8% resource room teachers, and 41.3% general education classroom teachers. Subjects completed a questionnaire on PL 94-142 and occupational stress. Results indicated that aspects of the Law are creating stress (e.g., paperwork, preparing IEP's), but that the two significant predictors of general stress, in relation to the Law, were "role clarity and discrepancy between teachers' perception of role and others' expectation of the teacher's role" (p. 27). Other stress conditions related to the Law also appeared to be impinging on educators; diagnosis and assessment were considered highly stressful activities by all types of teachers; resource room and special classroom teachers rated pupil load and implementation/preparation/teaching as highly stressful.

The authors recommended that preservice and inservice training should focus on knowledge, attitudes, and skills/competencies, plus the organizational needs of the school system as related to implementing PL 94-142. They also call for assistance with role clarification in the diagnostic/assessment/direct teaching process, because confusion over role expectations and responsibilities, with respect to the Law, was the major cause of stress among all teachers in the study. The authors also say that teachers may need individual stress management and burnout prevention/intervention programs to relieve stress and ameliorate debilitating job characteristics.

Bogenschild, E. G., Lauritzen, P., & Metzke, L. (1988). A study of teacher attrition. Milwaukee, WI: Marquette University, College of Education (doctoral dissertation).

The attrition study reported in this dissertation was based on examination of the Wisconsin Department of Public Instruction's database on attrition in general education and special education, and on a survey of a sample of 400 teachers. The survey instrument developed for this study included factors identified as causes of attrition in earlier research.

Significant differences in attrition rates were found between fully certified and provisionally certified special education teachers, between general and special education teachers, between teachers under and over age 35, between teachers with one to five years of experience and those with more experience, and between teachers with graduate training and undergraduate training only. There was no significant difference between rural and urban teachers in either general or special education.

The higher attrition rate among provisionally (emergency) certified special education teachers shows that this practice does not offer a long-term solution to teacher shortages. The rate of attrition in multicategorical programs was three times the attrition rate of teachers in any single categorical program. Attrition among teachers under age 35 and among teachers with less than five years' experience was significantly greater than attrition among older and more experienced teachers. The authors suggest teacher induction programs as one means for decreasing the isolation of special educators and of enriching the early teaching experience. Attrition rates among teachers with graduate training were significantly lower than attrition among those with only undergraduate degrees. This difference may be related to better salaries and benefits for graduate training, as well as the commitment demonstrated in seeking advanced training.

Although no single variable was identified as a prime cause of attrition, several factors important to retention were established: opportunity for career advancement and curriculum development; support from administrators, parents, and other professionals; and the ability to meet student needs. Salary, paperwork, stress, and preparation time were seen as secondary factors that become important when teachers do not receive support, cannot meet students' needs, or have little opportunity to contribute to curriculum decisions.

Bower, K. (1981, May). Keeping young teachers' options open. Independent School 40(9), 19-22. EJ 236240

This 1981 article predicted that the attrition rate of private school teachers would rise as young teachers became dissatisfied with low salaries, limited social life, high demands, and teaching itself. The author recommended that various incentives be offered to retain teachers, including: varied duties and responsibilities, time for professional development, adequate guidance and evaluation, and better fringe benefits.

Chandler, H. N. (1983). The loneliness of the special education teacher. Journal of Learning Disabilities, 16(2), 126-127. EJ 280962

This article reviews the problems of isolation and discouragement among special education teachers, as well as loss of morale among teachers across education due to criticism in the press, in politics, and by the public. The author argues that public school teachers have less collegiality than other kinds of workers, and that the special education teacher may be particularly isolated. Further, during preservice training, special educators may be taught by professors who have not worked in public schools for many years and may therefore not communicate a realistic notion of the conditions of the schools. Accordingly, the author believes there may be need for extending the training curriculum to include more full-time work in actual public school classrooms. Once on the job, teachers also need more support and encouragement from principals, who often already have too much to do.

Regarding the intrinsic rewards of teaching, one difference noted is that general education teachers may often hear about the later successes and accomplishments of their students, but special education teachers hear much less of this type of feedback after their students have moved on. Another source of stress is the multitude of responsibilities, including planning and delivery of instruction, behavior management, conferring with individuals from various disciplines, meeting with parents, participating in the usual school and faculty activities, attending additional district special education meetings, and "an avalanche of paperwork." In the face of these deterents, the author believes that special educators need to turn for support to other specialist and also need to "let professional organizations know that teachers, as well as students, need advocates on their side" (p. 127).

Cherniss, C. (1988). Observed supervisory behavior and teacher burnout in special education. Exceptional Children, 54(5), 449-454. EJ 366134 (available UMI)

This article reports on a method for assessing the relationship between supervisory behavior and staff burnout, which was tested in two schools for children with mental retardation. Also described is a new instrument, called the Supervisor Behavior Observation Scale.

The two schools in the study differed significantly in level of staff burnout. In the school with low burnout, the principal interacted less frequently with the staff and spent less time in classroom observation. This principal spent more time in her office and interacted more with her own superior. The principal of the low-burnout school also talked more and listened less; spent more time discussing work-related problems and less time discussing administrative issues; and gave staff more emotional support while engaging in less small talk.

An implication is that supervisors might help to reduce staff burnout by spending more time in planning, organizing, and advocating for the staff. The study also suggests a new way to measure supervisory behavior and its relationship to burnout among teachers.

Cook, J. M. E., & Leffingwell, R. J. (1982). Stressors and remediation techniques for special educators. Exceptional Children, 49(1), 54-59. EJ 271230 (available UMI)

This article examines stressors experienced by special educators that are within the realm of administrative remediation. Among the major problems reviewed are lack of role clarity, lack of time, lack of material resources, and insufficient recognition and reinforcement. Administrative strategies recommended for dealing with role clarity include: development of specific job descriptions with clearly defined responsibilities and provision of scheduled time and assistance so that teachers can fulfill responsibilities. Lack of time becomes a significant stressor when the following factors are additionally present: heavy student caseloads, the number of subjects of skill areas taught, ability-level discrepancies among students, the number of lesson plans required each day, the amount of extracurricular responsibilities required of teachers, the amount of administrative paper work, and the severity of each student's handicapping condition.

The authors continue by stating that special educators need adequate materials, books, and equipment to reduce stress and upgrade the services that are extended to pupils with disabilities. Adequate, well designed, designated space is also crucial to reducing frustration and stress among special education teachers, who also deserve a variety of support services designed to reduce stress, such as ongoing support during the first year of employment, participation in staff development meetings, access to confidential counseling for job-related stress, compensation for stress-induced illnesses, and provision of paraprofessional support services.

Dixon, B., Shaw, S. F., & Bensky, J. M. (1980). Administrator's role in fostering the mental health of special services personnel. Exceptional Children, 47(1), 30-36. EJ 234362 (available UMI)

The focus of this article is on the need for administrators to deal with the problem of teacher burnout. Several models for evaluating the mental health of individuals and organizations are presented, such as simple observation of causal variables like management style and strategies, organizational objectives, and structure. The authors believe that analysis of environmental conditions (superiors, associates, job demands, and student interactions) should take place in order to gain insight into the underlying causes of staff members' feelings of stress.

According to this article, the special services administrator should plan and design change strategies that will reduce or eliminate stress conditions. Such plans for change should address the four levels of change: knowledge, attitudes, individual behavior, and organizational performance. Criteria should also be established to evaluate whether the needed changes occur smoothly and with the least amount of negative impact.

Fimian, M. J. (1986). Social support and occupational stress in special education. Exceptional Children, 52(5), 436-442.

This article presents the results of a study that examined the presence or absence of peer and administrative support in terms of the frequency and strength of stress reported by three statewide samples of special education teachers. Stress variables included the strength and frequency of personal/professional stressors, professional distress, discipline and motivation, emotional manifestations, biobehavioral manifestations, physiological-fatigue manifestations, and total stress. A majority of group comparisons indicated stronger and more frequent stress levels for non-recipients of supervisory support than for recipients. Also, a smaller number of group comparisons indicated stronger and more frequent stress levels for non-recipients of peer support than for recipients. Findings were generally consistent across all three samples.

The results show that teachers are more apt to receive aid and support from peers in times of stress than they are to receive it from supervisors, and that such support can be a significant moderator of stress. Supervisory support also plays a major role in moderating both the perceived strength and frequency of teacher stress.

According to the author, it appears that one crucial area of preservice and inservice training, organizational analysis, and research should be the examination of the types and nature of support that could realistically be provided to teachers. Study should also examine the types of supports that teachers currently and informally provide to other teachers and how such supports can be varied, both formally and informally, to moderate stress.

Fimian, M. J., & Blanton, L. P. (1986). Variables related to stress and burnout in special education teacher trainees and first-year teachers. Teacher Education and Special Education, 9(1), 9-21. EJ 334311 (available UMI)

A study was done to examine role, stress, and burnout problems experienced by 379 special education teacher trainees and 26 first-year teachers. Correlational analyses determined the degree to which these factors were related to personal, academic, and organizational variables. Regression analyses were used to establish how and to what degree these variables, in combination, were significant predictors of trainee and first-year teacher stress and burnout. Analysis of variance was used to identify significant differences between and among three levels of traineeship and one of teaching, with regard to role, stress and burnout problems in special education classrooms.

Results indicated that most role, stress, and burnout problems were significantly inter-related, but that not all of the background variables predicted significant stress and burnout levels. Different levels of role, stress, and burnout problems were observed in respondents at various stages of professional development. The results suggest that teacher educators should directly instruct (by showing, exposing, supporting) would-be teachers about the realities of the schools. Also, teacher preparation programs should view themselves as among the chief agents for promoting change in new

teachers' behaviors and perceptions. Such programs should include proactive stress and burnout and management practices, beyond the lecture level and including active teaching and person-change techniques such as meditation, relaxation, exercise, diet, nutrition, and other well-being measures. More peer and supervisory support during the first years of teaching can also help to reduce stress, and systems-change strategies could be used to lessen the impact of conditions in the "real world" and decrease the frequency of conflict situations in which teachers often find themselves. In short, "survivability" needs to be a high priority in teacher preparation.

Fimian, M. J., & Santoro, T. M. (1983). Sources and manifestations of occupational stress as reported by full-time special education teachers. Exceptional Children, 49(6), 540-453. EJ 282812

A survey covering 365 special education teachers was conducted to determine the degree of strength and degree of frequency of various sources of stress. Overall, many teachers believed that their personal priorities were being short-changed by professional time demands. Other sources of stress included: lack of recognition, promotion, and advancement, and inadequate salaries. Moderate causes of stress were: lack of time to spend with individual students, having to contend with inadequate discipline policies, and having to monitor pupil behavior constantly. Frequent sources of stress included: limited preparation time, pace of the school day, and large caseloads.

The six strongest emotional manifestations of stress reported by teachers in this study were: becoming frustrated, mentally exhausted, excessively worried, and feeling pressured, depressed, and anxious. The strongest behavioral manifestations were: separation of one's job from one's personal life, defensiveness, deterioration of one's social and professional performance, sleeping too much, and dealing with students on an intellectual and non-personal basis. Those manifestations reported as strongest were also reported as most frequent. Various physiological manifestations were also reported, including: physical exhaustion, headaches, fatigue, acid stomach, and heart palpitations.

According to the authors, there appears to be no one stress source or manifestation that takes precedence over others. Certain teachers report the sources and effects of stress as occurring significantly more often and as being significantly stronger than do other teachers. What is clear is that a problem definitely did exist for a significant number of teachers in this sample. The authors state that the time has come to avoid "teacher stress and teacher burnout" as a bandwagon topic but, rather, to identify and address a number of the reasons for, an result of, job-related stress in special education teachers.

Frith, G. H., & Mims, A. (1985). Burnout among special education paraprofessionals. Teaching Exceptional Children, 17(3), 225-227. EJ 315341

This article was written because burnout among paraprofessionals has not received adequate attention. The authors describe stress as the primary cause of paraprofessional burnout and state the strong possibility that paraprofessionals may be more affected by stress than are many other personnel. Reasons include: stagnation due to lack of formal training and subservient roles; lack of career advancement because of minimal incentives for professional development; inadequate training for active service on the educational team; and poor organizational structure of some schools. Paraprofessionals also burn out due to undefined role descriptions, lack of support from authority figures, poor salaries and lack of recognition, particularly when the highly competent are viewed as a threat by their supervising teachers.

Selected examples of coping strategies for dealing with paraprofessional burnout include: administrative development of a career ladder; team concepts; and well defined job descriptions. Teachers can also address this problem by assigning meaningful tasks, providing periodic rewards, and offering recognition for successful ideas. Further, staff development should be designed to help paraprofessionals recognize and cope with symptoms of burnout.

Gillet, P. (1987). Preventing discipline-related teacher stress and burnout. Teaching Exceptional Children, 19(4), 62-65. EJ 354049 (available UMI)

This article emphasizes that supervisors should assist school staff in overcoming stress associated with student discipline by providing opportunities for teachers to learn from mistakes, suggesting new disipline alternatives, and structuring situations so that teachers feel in control of their classes, curricula, and behavior management programs. Strategies recommended for supervisors include: development of clear guidelines for disciplinary action; review of IEP's and behavior management plans and prioritization of problem behaviors; provision of support through regularly scheduled visits; follow-up of staff requests for help with discipline problems; acknowledgment that control of the class belongs to the teacher; demonstration of disciplinary strategies and procedures; acknowledgment that all discipline cases cannot be remediated; and development of a support network for group sharing of special problems. Supervisors should also advocate employee assistance programs such as stress reduction seminars, counseling, and physical fitness options, as part of a health insurance program.

Greer, J. G., & Wethered, C. E. (1984). Learned helplessness: A piece of the burnout puzzle. Exceptional Children, 50(6), 524-530. EJ 368456 (available UMI)

Learned helpless is defined as "A phenomenon wherein people are repeatedly exposed to situations beyond their control. Such exposure results in passivity, decreased interest, and a reduction in the initiation of responses" (p. 524). This article uses the theory of learned helplessness as a model for understanding burnout experienced by special education teachers.

The authors compare treatments for learned helplessness and possible parallel strategies for preventing burnout, including helping educators to set realistic and attainable goals, recognize the control that they do have, and develop a realistic understanding of causes for their actual failures.

According to the authors, burnout among teachers is a painful and destructive response to excessive demands on their energy, strength, and resources. Common to most instances of burnout is a real or perceived lack of control in the classroom (e.g., discipline), in the school system (e.g., administrative leadership), and in the community (e.g., intolerance toward individuals with disabilities). This lack of control presumably results in learned helplessness.

Helping teachers to set realistic and attainable goals should start at the preservice training level. Role clarification and consensus should be reached between administrators and teachers through open communication to prevent overload, failure, and learned helplessness. Strong evidence of some sort of control can be provided by documentation of student progress and supervisory/administrative feedback in the form of praise and recognition. Accurate and realistic causal attributions provide the only sound basis for remediation of failures.

Grissmer, D. W., & Kirby, S. N. (1987). Teacher attrition: The uphill climb to staff the nation's schools. Santa Monica, CA: The RAND Corporation. ED 291735

This report draws together available evidence on teacher attrition, which is the largest single determinant of the demand for new teachers. Most new teachers are hired in order to replace teachers who have left, rather than to meet demands of expanding enrollments or new programs. Without a better understanding of the dynamics of attrition, predictions of future supply and demand are likely to be in considerable error.

The authors develop a strategy for improving forecasts of future attrition rates by presenting a theory of teacher attrition that attempts to account for the disparate reasons for attrition and to explain the patterns of attrition that are unique to each life cycle and career stage. Factors to be considered include timing of marriage; birth of children; geographical movement; retirement; interdistrict mobility to seek higher salaries, better assignments, or working conditions; returning for graduate education; promotion or lateral transfer to other education-related jobs. Policy changes aimed at retaining younger teachers who perform well are also important. Because attrition patterns can be markedly different for individual states, state data anlysis of attrition factors and other supply/demand factors is emphasized.

Although understanding of attrition is essential to forecasting teacher supply and demand, data collection and analysis concerning attrition has been minimal. "Part of the neglect of teacher attrition research has simply been the lack of clear need because of the recent oversupply of teachers. However, this fragmentation of effort also exists because of the state-federal division of responsibilities in education. Many states have excellent data on which to support attrition research, but limited research

resources and expertise to carry out such research. On the other hand, the federal government has a clear role to carry out this type of research -- especially because there would be large economies of scale in carrying out such research -- but has not either generated or collected the data to support such research" (p. xviii).

Heyns, B. (1988, April). Educational defectors: A first look at teacher attrition in the NLS-72. Educational Researcher, 24-32. EJ 372883 (available UMI)

The fifth follow-up of the National Longitudinal Study, 1972 (which covers the high school class of 1972) was completed in 1986. On this occasion, a special supplement was sent to all respondents who had identified themselves as present or former teachers or as having had teacher training. The resulting data permitted the first analysis of teacher attrition based on a national sample that has been followed for ten years or more of professional experience. This article discusses the findings. The first finding is that "teacher turnover is far higher than the levels of attrition suggest. Attrition on the whole has probably declined, although there are still dramatic amounts of career mobility. The majority of current teachers from the high school class of 1972 either entered, or re-entered, the profession since 1980" (p. 30). The next finding was that "former teachers are quite similar to current teachers, except that they have typically been employed in school work settings that seem better than average. Although the majority of former teachers do not want to return, they do not constitute a cadre of disaffected escapees" (p. 30). The third finding concerns implications of educational policies to enhance teacher professionalism and school reform. "Although improving the lot of teachers by raising professional standards and providing better remuneration and working conditions is an entirely worthwhile goal, it is not clear that such reforms will reduce attrition . . . . it is important to remember that, for many teachers, ease of transfer and re-entry, geographic mobility, and the potential for extended leaves are benefits unique to education. Career ladders, peer evaluators, mentors (or the opportunity to be a mentor), and levels of remuneration that are tied to activities or experience in a specific school or district may not be equally appealing substitutes" (p. 31).

Kaiser, J. W. (1981, September-October). Motivation deprivation: No reason to stay. Journal of Teacher Education, 32(5), 41-43. EJ 254439 (available UMI)

This article reviews teaching conditions and incentives in terms of Maslow's description of human needs, "as a never-ending hierarchy of desires," progressing from basic physiological needs, to safety and security, to a sense of belonging and love, to ego needs. In analyzing these factors with regard to teaching and the schools, the author argues that "burnout cannot be prevented by increasing the hygiene factors of salary, fringe benefits, and good human relations" (p. 43). Rather, "boards of education must work with teachers' organizations to increase the motivational factors of enriched job responsibility, a chance of advancement, recognition for excellence in performance, and increased sense of achievement" (p. 43). Remarking that these are lessons that industry learned long ago, the author points out that "one must pay high wages to expect a person to work near an open hearth furnace because of the lack of motivation factors attached to such

a job. If motivating factors are non-existent, and if hygiene factors are eroding with the national economy, there will be no reason for those who can secure other employment to stay" (p. 43).

Louis Harris & Associates. (1988). The Metropolitan Life survey of the American teacher: Strengthening the relationship between teachers and students. New York, NY: Metropolitan Life Insurance Company.

The 1988 Metropolitan Life survey covered a wide range of teachers' and students' perceptions. One of the topics concerned teachers' job satisfaction and career plans. Among the findings are these:

* 50% of teachers in the survey said they were satisfied with their jobs. This is 10% more than those who reported job satisfaction in 1987.

* 34% of all teachers surveyed said they would leave teaching in the next five years.

* Among the teachers who said they would leave the profession in the next five years, 25% were white teachers and 41% were teachers from ethnic minority groups.

* 55% of teachers from ethnic minority groups who have been teaching less than five years said they intended to leave teaching in the next five years.

* The pollster said that predictions of minority attrition stemmed from poor working conditions in urban schools, where most teachers from ethnic minority groups are employed.

Morsink, C. V. (1988, February). Changes in the role of special educators: Public perceptions and demands. Exceptional Educators Quarterly, 15-25. EJ 259 668 v2 n4 Feb. 1982.
This article reviews such changes in role, demands, and perceptions of special education as school reform, shifts in the school population, teacher supply and demand issues, emergency certification, accountability, malpractice, attrition, and the relationship of increased demands to burnout. This annotation focuses on the latter two topics. The author states that the rate of attrition due to burnout and related factors is extremely high among special educators, with rates estimated up to 34-50%. Attrition rates of up to 21% at the end of the first year of employment and 53% at the end of the fifth year are reported for teachers in emotional disturbance/behavior disorders. The author also points to studies suggesting a relationship between burnout and increased demands on teachers and schools. Stress appears to be manifested in: physical and emotional exhaustion; frustration; negative, cynical, and irritable feelings; working harder and longer, yet being less productive. Among the contributing factors cited are: minimal administrative support, low pay, heavy loads of trivial paperwork, training that emphasizes academic rather than clinical

preparation, and too few hours of professional preparation. Citing research showing that teachers need to feel that their contributions are valued and have an impact on their most difficult students, the author concludes that special education teachers may burn out more rapidly because they feel that they are not having an impact on these children.

Murnane, R.J. (1987, May). Understanding teacher attrition. Harvard Educational Review, 57(2), 177-182.

This article reports on a study undertaken because the lack of understanding of teachers' career patterns has impeded the development of better models on which to base predictions of shortages and surpluses. The author analyzed a longitudinal database of 13,000 Michigan teachers. Results of analysis suggest that career patterns differ not only between men and women, but also across various subject and specialty areas. The findings led the author to state that attrition patterns may not simply reflect teachers' failures or the inability of public education to retain talented personnel. Rather, these patterns may represent teachers' reasonable decisions to teach for only a few years and then raise a family or pursue other careers.

With regard to variations in attrition among types of teachers, results of this study showed that chemistry and physics teachers were far more likely to leave teaching after a few years than were history and biology teachers. Further, "opportunities outside of teaching vary enormously across fields of specialization" (p. 34), and, thus, if all teachers are always paid on the same scale, it will always be difficult to recruit and retain certain types of teachers who have many, better opportunities elsewhere. Finally, the author points out that, because thoughtful decisions often lead teachers to view teaching as an initial springboard to other career goals they have had all along, some factors contributing to attrition are probably equally important in attracting talented young people into teaching for at least a few years and in motivating former teachers to return to the classroom.

Murnane, R. J., Singer, J. D., & Willett, J. B. (1988). The career paths of teachers: Implications for teacher supply and methodological lessons for research. Educational Researcher, 17(6), 22-30.

This article reports on a study which applied the analytical technique called Proportional Hazards Modeling to examine the connection between specific teacher characteristics and career duration. The authors call into question the more traditional methods of projecting supply and demand which assume that attrition rates for teachers in different specialties are the same, that attrition rates do not change over time, and that teachers who leave teaching do not come back to teaching. The dataset for this study included information on "all of the 5,869 white teachers who began their careers in Michigan public schools in 1972 or 1973, teaching either an elementary school class, or any of the following secondary school subjects: English, social studies, math, biology, chemistry/physics" (p. 24).

To analyze these data, the authors used analytic methods known as survival analysis, whose mathematical transformations are the survivor function and the hazard function. Survival analysis was developed to study clinical lifetime data, such as how long victims of a certain disease live after diagnosis of treatment. "Broadly speaking, the survivor function is a plot that indicates how likely it is that a teacher will survive in teaching beyond one year, two years, three years, four years, and so on. It is a picture of the probability of hazard as a function of time" (p. 25). The hazard function "describes the risk of leaving teaching at any given time. It tells, for instance, whether the second year of teaching is particularly risky or whether the third year is less risky than the second and so on" (p. 25). Based on these methods, the results of the study showed that:

* Young women (entry age under 30) have the shortest "spells" of teaching. Among young women entering teaching in 1972, about 54% survived after five years and about 39% survived after 8 years. Men had a better survival rate. Between 1972 and 1982, more women entering the profession were over age 30, and these changing demographics imply an impact on future projections concerning teacher supply.

* Many teachers return. Between 1/4 and 1/3 of teachers who left teaching within the first eight years returned after a career interruption. The return rate of young women (31% was highest) but this group also had the shortest median second "spell" of teaching.

* Chemistry/physics teachers have short first "spells" of teaching, and chemistry/physics teachers are not likely to return to teaching. The authors interpret these findings in light of job opportunities outside teaching at far higher salaries. The attrition and return rates for math teachers, on the other hand, were different than those for chemistry/physics teachers, although business/industry salaries are comparable. The authors point out that the high-salary jobs for math graduates "may have been available only to the minority of math teachers who taught advanced math courses, and not to the majority of math teachers who teach algebra, geometry, or remedial math" (p. 29).

The authors discuss several implications of their study. They recommend that supply and demand models incorporate complex factors concerning teacher career patterns, and they speculate that state school reform policies may be having positive and/or negative impacts on teacher career patterns, recommending that these outcomes should be considered more carefully in state policy making.

Murphy, M. L. (1985). An analysis of teacher incentives and disincentives relative to teacher retention. Reno, NV: University of Nevada-Reno, College of Education (doctoral dissertation).

The purpose of this study was to analyze the importance of various incentives and disincentives relative to teacher retention, as perceived by teachers in four counties of Nevada. The study was designed to discover

the top five incentives which impel teachers to leave teaching, and to determine whether these incentives and disincentives vary across teacher groups. A three-page questionnaire was developed, and demographic information was requested. On Part A of the questionnaire, teachers were asked to select 10 of the 35 incentives which most encourage them to stay in teaching. They were then asked to rank the 10 incentives, with 1 indicating most important and 10 least important. Similarly, on Part B teachers were asked to select and rank 10 disincentives which would most strongly influence them to leave teaching. The sample was selected via a stratified random sampling technique. There were 587 respondents for a response rate of 76 percent. Descriptive statistics were used. Major results are described as follows.

The top-ranked incentive was "a feeling of accomplishment in teaching." This was a unanimous selection in all the teacher groups. Ranked the second most important incentive was "a feeling that the value of my teaching as a contribution to society is high." The three items that were ranked third, fourth, and fifth as incentives were: self-determination in decisions affecting teaching; adequate time off; and good job security.

The number-one disincentive as ranked by all but one of the 21 subgroups was low salary. Low status was the disincentive ranked second. Disincentives ranked as third, fourth, and fifth most important were: nonsupportive, negative working environment; unmotivated students; and nonsupportive administrators. Most subgroups tended not to vary on the selection of the five top incentives and disincentives.

The author had several recommendations. Since the two top incentives were so strongly ranked, school districts and the public need to find additional ways of recognizing the accomplishments of teachers. Although non-monetary incentives appeared to be at least as important as salaries in retaining talented teachers, substantial salary increases are necessary.

National Easter Seal Society. (1988). Crisis ahead: Recruitment and retention of rehabilitation professionals in the nineties and beyond. Chicago, IL: Professional Advisory Committee of the National Easter Seal Society.

According to this report, "every year, the number of occupational therapists and physical therapists who 'move on' is too high. Rehab flight -- whether to other centers or to other careers -- must be stemmed" (p. 2). Major reasons set forth for this attrition are:

* Higher reimbursement offered elsewhere.
* Desire to pursue advanced degrees.
* Desire on the part of women to marry and have children.
* Pursuit of an administrative career or another career entirely.
* Professional dissatisfaction with lack of independence, career advancement, and careers which govern rehabilitation services and professionals.
* Feelings of not enough say in client related decisions, despite knowledge.

Among the solutions to these causes of attrition advanced in the report are: day care for children of professionals; part-time employment and job-sharing

opportunities; expanded career ladders; profit sharing; and salary increases. The report also includes a number of other ideas on the recruitment and retention of rehabilitation and related service personnel.

Pigge, F. L. (1985). Teacher education graduates: Comparisons of those who teach and do not teach. Journal of Teacher Education, 36(4), 27-28.

The purpose of this study was to determine whether there were ability and achievement differences between and among certifiable teacher education students who did and did not commence teaching careers upon graduation from higher education programs. Two samples of students drawn from a large midwestern university were used to produce the data for this investigation. In terms of numbers of certified teachers prepared, this institution has ranked within the top fifteen in the nation since the early 1970's.

With regard to academic ability and achievement, this study found that the best candidates did not choose to enter the teaching profession upon graduation, even after they had been trained and certified to be teachers. These findings were true for teachers prepared in the early 1970's, as well as for those prepared in the early 1980's. The teacher education graduates of the early 1980's, especially those who wanted to enter the teaching ranks, were generally less academically talented than were the graduates of the early 1970's. Future manpower projections will need to take these findings into account.

Smith, M. L., White, W. J., & Zabel, R. N. (1984). College/university program variables and their relationship to the job satisfaction of special education teacher educators. Teacher Education and Special Education, 7(1), 39-45.

This article reports the results of a national survey to investigate relationships between various job-related factors and job satisfaction among teacher educators in special education. Five discrete job factors were found and used for multivariate, univariate, and post hoc analysis. The five factors were: social/community conditions, advancement opportunities, program quality, financial conditions, and departmental resources.

Results indicated that faculty from larger institutions, programs offering advanced degrees, noncategorical programs, and urban or suburban areas were more satisfied than those from institutions with a smaller student population, rural areas, and programs offering only bachelor's degrees. One factor, financial conditions, was a major job satisfaction variable when compared with other program variables. Faculty at mid-sized institutions (15,000 to 20,000 students) were the least satisfied with their financial conditions and departmental resources, with advancement opportunities second least satisfying, and social/community conditions third least satisfying.

A major contribution of this study is to establish a data base from which such issues can be examined systematically in the future.

Stern, D. (Ed.). The condition of education, Volume I: Elementary and secondary education. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Unpublished tabulations from the Bureau of Labor Statistics estimate the overall teacher turnover rate across education to be 4.9% at the elementary level and 5.6% at the secondary level. According to this source, turnover accounts for a far greater share of new hiring than do other factors, including enrollment increases. (See other annotations in this bibliography for estimates of turnover in special education.)

Taylor, L., & Salend, S. J. (1983). Reducing stress-related burnout through a network support system. The Pointer, 27(4), 5-9. EJ 289900 (available UMI)

This article reviews literature on teacher burnout, showing that "the increased turnover in the profession seems to indicate that 30 percent of America's teachers would prefer to be working in another field" (p. 5). Other findings in this literature review included: a high incidence of physical and mental illnesses that were potentially job-related as reported by teachers; a higher incidence of burnout among teachers who work with students who have disabilities; reduced sensitivity to the social, physical and emotional needs of clients among burned-out professionals; a higher priority on survival than on direct teaching activities among burned-out teachers; less task orientation and less positive reinforcement for students by anxious teachers; greater student behavior problems in classrooms where teachers are highly anxious; less flexibility, more cynicism, and more negativity among burned-out teachers; and increased levels of alcohol and/or drug abuse, absenteeism, marital conflict, mental illness, depression, and excessive smoking among teachers who experience burnout.

While the authors show that burnout seems to be related to such factors as school violence, class loads, salaries, and demands for accountability, they state that "the main cause of burnout appears to be stress-related anxiety" (p. 5), produced by job demands, needs for self-fulfillment and ego satisfaction, and, particularly among special educators, excessive paperwork, pupil-teacher ratios, inadequate planning time, low salaries, discipline problems, student attitudes, and lack of support from other school personnel, including the principal.

The authors propose the establishment of a network support system to reduce stress in special educators. The networks envisioned should be interdisciplinary in nature, including other educators (general classroom teachers, special educators, support personnel, and administrators), health and medical professionals (physicians, therapists, nutritionists), parents, social service workers, community resources, and professional organizations. The networks would expand the teacher's resources to respond to crises; help reduce and manage stress; support teachers faced with difficult interpersonal or personal situations; increase teachers' resources for helping parents; involve teachers with the broader community; and provide teachers with opportunities for professional and personal growth.

Wangl, E. G., Metzger, D. J., & Levitov, J. E. (1982, September-October). Working conditions and career options lead to female elementary teacher job dissatisfaction. Journal of Teacher Education, 33(5), 37-40.

A study was conducted to investigate job satisfaction among female elementary school teachers. The sample represented 20 percent of female regular elementary classroom teachers from four school systems, covering various demographic socioeconomic and geographical characteristics (including a large urban southern system, a rural midwestern system, and two suburban western systems). Responses were drawn from 225 subjects (65% of the sample). Nearly 40% of the subjects said they would not again choose elementary teaching if they could change their original career choices.

Major factors underlying dissatisfaction were working conditions and perceptions of women's roles in the profession. Items with high factor pattern coefficients for working conditions included: teachers' perceptions of the workplace, professional recognition, salary, flexible hours, and adult contact. Items with high factor pattern coefficients for women's roles in the profession included: teacher perceptions of career importance and female career options. There was no correlation between the two teacher satisfaction factors and years of teaching experience. Teachers in the study generally indicated that "having a career" was highly important to their identities. The authors concluded that "rival career options in combination with increasing teacher role dissatisfaction will influence the quality of elementary education. Consequently, changes are necessary to attract and retain capable, motivated teachers" (p. 39).

Weiskopf, P. E. (1980). Burnout among teachers of exceptional children. Exceptional Children, 47(1), 18-23. EJ 234360 (available UMI)

This article reviews literature on burnout among members of the helping professions, particularly causes and symptoms of burnout in special education. Special educators are subjected to varying degrees of occupational stress because of:

* Work overload and time pressures. Not only are special educators subjected to a variety of job demands and environmental pressures, but they are required to be emotionally available to their students.

* Lack of perceived success. The problems of students with disabilities may be easier to recognize than their progress, which may appear in slow increments. Both the reality of success or lack of it, and the teacher's perception of lack of success, can contribute to a deterioration of self-esteem.

* Amount of direct contact with children. Many students with disabilities require the constant supervision of their teachers, and longer working hours are associated with more stress and negative staff attitudes.

* Student-teacher ratio. In high-ratio centers, staff members report more pressure and stress and less job satisfaction than do staff members in low-ratio situations.

* Program structure. Less structured centers have been shown to create greater emotional stress among staff members.

* Responsibility for others. The requirement of providing for other people can lead to emotional depletion of the worker, unless support services help to replenish ego needs.

Burnout prevention strategies covered in this article include: advance knowledge of stress associated with teaching in special education; the setting of realistic goals and planning for success; delegation of busy work and non-teaching duties to aides and volunteers; and avoidance of isolation from the rest of the school staff. Team teaching, learning centers, and teacher time-out can also be useful to reduce stress. Teachers also need intellectual stimulation and group participation activities, as well as activities, hobbies, and special interests apart from school.

Zabel, R. H., Smith, M. L., & White, W. J. (1984). Relationships between selected personal characteristics of special education teacher educators and their job satisfaction. Teacher Education and Special Education, 7(3), 132-141.
EJ 308401 (available UMI)
A nationwide survey was conducted in 1982 to examine job conditions and relationships between professional satisfaction of teacher educators in special education and personal and job-related characteristics. More than 600 faculty members completed a questionnaire soliciting information about those conditions and ratings of their satisfaction with various aspects of their work. Factor analysis indicated five discrete job satisfaction factors (social/economic conditions, advancement opportunities, program quality, financial conditions, and department resources). Analysis of variance procedures yielded statistically significant differences on these factors in terms of age, marital status, sex, academic rank, tenure status, salary, and number of years in higher education and in the present position.

"Taken together, these data on relationships between personal characteristics and ratings of job satisfaction could be used to provide profiles of the most and least professionally satisfied special educator. The former would be a married, male, full professor with tenure, over 40 years old, earning more than $40,000, who has been in higher education and in his present position for more than 20 years. The least professionally satisfied individual, on the other hand, would be an unmarried, female, non-tenured, assistant professor, under 40 years of age, earning less than $25,000, with less than six years in higher education and in her present position" (p. 140).

Because teacher educators in special education experience high expectations for providing sufficient numbers of adequately trained personnel while, at the same time, experiencing diminishing fiscal resources for accomplishing this task, the authors believe that special education faculty members may have greater stress and less professional satisfaction than do faculty members in some other disciplines.

Zabel, R. H., & Zabel, J. K. (1982). Factors in burnout among teachers of exceptional children. Exceptional Children, 49(3), 261-263. EJ 274405 (available UMI)

An exploratory study was conducted to determine whether the concept of burnout has relevance for special education teachers. A random sample of 1,000 teachers in Kansas received questionnaires that included items on characteristics of the respondent and job conditions. Responses were received from 78.6% of the sample.

A major concern of the study was to examine relationships between level of teaching (preschool through high school), model of service delivery (itinerant, consulting, resource, self-contained, institutional), and student label (learning disabled, educable mentally retarded, trainable mentally retarded, emotionally disturbed, gifted, hearing impaired, visually impaired, multiply/severely handicapped), and three dependent measures (emotional exhaustion, depersonalization, and personal accomplishment).

Data analyses revaled that teachers at the junior high school level were at the greatest risk of burnout. Teachers of emotionally disturbed students reported the greatest occupational stress. Consulting teachers reported the most emotional exhaustion and depersonalization, while itinerant teachers fared much better. Age and experience were significantly related to burnout measures; older and more experienced teachers had less exhaustion and depersonalization. Teachers who perceived external support reported less emotional exhaustion and depersonalization with greater personal accomplishment.

POSTSCRIPT: Considering the magnitude of dissatisfaction and burnout among teachers expressed in several surveys and other studies presented in this bibliography, the field of special education would do well to consider not only the impact of attrition on teacher supply and demand, but also the attitudes, feelings, and performance of teachers who may be dissatisfied or troubled but who do not leave the field -- and their impact on the education of students with disabilities. J.S-D.